

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A computer system, including a processor, that allows front-end software applications to use multiple versions of a data mining model during execution of analytical tasks, the computer system comprising:

a front-end software application operable to generate transaction data and send task requests to an analytical processing front-end application, a task request for analytical processing including a predefined task name and input data for a data mining model, the front-end software application being one of multiple front-end software applications operable to send task requests for analytical processing to the analytical processing front-end application;

the analytical processing front-end application comprising:

a model version selection module that is operable to use a predefined task name in a task request received from [[a]] the front-end software application to determine identify, from predefined task definition information, a specific version of [[a]] the data mining model to be used during execution of an analytical task, the specific version of the data mining model being included in an analytical back-end application, the analytical back-end application being distinct from the analytical processing front-end application and including multiple versions of the data mining model; and

a mapping module that is operable to map, in accordance with predefined mapping definitions included in the predefined task definition information, the input data included in the task request received from the front-end software application into a format usable by the specific version of the data mining model, and

the analytical processing back-end application operable to invoke execution of the analytical task using the specific version of the data mining model and the mapped input data to generate output data.

2. (Original) The computer system of claim 1, wherein the mapping module is operable to map input data included in the task request into a format usable by any version of the data mining model.

3. (Original) The computer system of claim 1, wherein the mapping module is further operable to map output data generated upon execution of the analytical task into a format usable by the front-end software application.

4. (Original) The computer system of claim 1, wherein the analytical task is a prediction task.

5. (Currently Amended) A computer-implemented method for [[using]] providing a software interface to multiple versions of a data mining model during execution of analytical tasks, the method comprising:

obtaining from a front-end software application a first task request for analytical processing from a front-end software application, the first task request containing a first set of input values and a predefined task name, the front-end software application being one of multiple front-end software applications operable to send task requests for analytical processing to the software interface;

using the predefined task name to identify, from predefined task definition information, a first version of the data mining model to be used when executing a first analytical task;

using a first input mapping function to map, in accordance with predefined mapping definition information included in the predefined task definition information, the first set of input values into a first set of mapped input values for use by an analytical software application when executing the first analytical task with the first version of the data mining model when executing the first analytical task;

obtaining from the front-end software application a second task request for analytical processing from the front-end software application, the second task request containing a second set of input values and the predefined task name, and the second set of input values being a subset of the first set of input values;

using the predefined task name to identify, from predefined task definition information, a second version of the data mining model to be used; and

using a second input mapping function to map, in accordance with predefined mapping definition information included in the predefined task definition information, the second set of input values into a second set of mapped input values for use by the analytical software application when executing the second analytical task with the second version of the data mining model when executing the second analytical task.

6. (Previously presented) The computer-implemented method of claim 5, wherein each one of the second set of input values has a data type that matches a data type of one of the input values from the first set of input values.

7. (Original) The computer-implemented method of claim 5, wherein the method further comprises:

sending a first set of output values generated upon execution of the first analytical task to the front-end software application; and

sending a second set of output values generated upon execution of the second analytical task to the front-end software application.

8. (Original) The computer-implemented method of claim 7, wherein sending a second set of output values generated upon execution of the second analytical task to the front-end software application includes sending a second set of output values that are a subset of the first set of output values.

9. (Previously presented) The computer-implemented method of claim 8, wherein sending a second set of output values that are a subset of the first set of output values includes sending a second set of output values that each individually have a data type that matches a data type of one of the output values from the first set of output values.

10. (Original) The computer-implemented method of claim 7, wherein:

sending a first set of output values generated upon execution of the first analytical task to the front-end software application includes using a first output mapping function to map the first set of output values into a first set of mapped output values for use by the front-end software application; and

sending a second set of output values generated upon execution of the second analytical task to the front-end software application includes using a second output mapping function to map the second set of output values into a second set of mapped output values for use by the front-end software application.

11. (Previously presented) The computer-implemented method of claim 10, wherein the second output mapping function is identical to the first output mapping function.

12. (Previously presented) The computer-implemented method of claim 5, wherein the second input mapping function is identical to the first input mapping function.

13. (Original) The computer-implemented method of claim 5, wherein the first and second analytical tasks are prediction tasks.

14. (Previously Presented) A computer-implemented method for configuring a prediction task definition, the method comprising:

providing a mining model class identifier for a data mining model;

providing a unique version identifier to identify a unique version of the data mining model to be used during execution of a prediction task;

providing one or more input data fields to hold input information;

providing input mapping definition information to map the input information into mapped input information capable of being used by the unique version of the data mining model during execution of the prediction task;

providing one or more output data fields to hold output information generated upon execution of the prediction task;

providing output mapping definition information to map the output information into mapped output information capable of being used by a front-end software application; and

storing the mining model class identifier for the data mining model, the unique version identifier, the one or more input data fields, the input mapping definition information, the one or more output data fields, and the output mapping definition information as a prediction task definition that is capable of being accessed when a request is received that the prediction task be performed.

15-16. (Cancelled)

17. (Currently Amended) A computer-implemented method for using multiple versions of a data mining model during execution of analytical tasks, the method comprising:

importing, at design time, a first version of a data mining model having a first set of model values, each model value having a data type;

using, at run time, the first version of the data mining model during execution of a first set of analytical tasks requested by a front-end software application, the use of the first version of the data mining model being determined by an analytical processing front-end application using predefined task definition information;

importing, at design time, a second version of the data mining model having a second set of model values, the second set of model values being a subset of the fist set of model values; and

using, at run time, the second version of the data mining model during execution of a second set of analytical tasks requested by the front-end software application, the use of the second version of the data mining model being determined by the analytical processing front-end application using predefined task definition information.

18. (Previously presented) The method of claim 17, wherein importing a second version of the data mining model having a second set of model values includes importing a second version of the data mining model having a second set of model values that each individually have a data type that matches the data type of one of the model values from the first set.

19. (Original) The method of claim 17, wherein the first and second sets of analytical tasks are prediction tasks.

20. (Original) The method of claim 17, wherein:

importing a first version of a data mining model includes importing a first version of a data mining model that is defined using the Predictive Modeling Markup Language (PMML); and

importing a second version of the data mining model includes importing a second version of the data mining model that is defined using PMML.

21. (New) The computer system of claim 1 wherein the analytical processing front-end comprises a business rule engine operable to use output data generated by the analytical processing back-end application to determine whether an event should be triggered in the front-end software application.

22. (New) The method of claim 5 further comprising using business rules and output resulting from executing the first analytical task with the first version of the data mining model to determine whether an event should be triggered in the front-end software application.

23. (New) The method of claim 14 wherein the data mining model comprises one of multiple data mining models included in an analytical back-end application, the analytical back-end application being accessible to multiple front-end software applications through an analytical processing front-end application.

24. (New) The method of claim 17 wherein the data mining model comprises one of multiple data mining models included in an analytical back-end application, the analytical back-end application being accessible to multiple front-end software applications through the analytical processing front-end application.

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25. (New) The method of claim 24 further comprising using business rules and output resulting from executing the first set of analytical tasks with the first version of the data mining model to determine whether an event should be triggered in the front-end software application.